

out  
1 A. vane (90) restraining means by a friction fit between the vane tip (98) and  
2 groove walls (155) when received into the groove (150) or by application of an adhesive  
3 or a mechanical fixing means between the vane tip (98) and the groove walls (155);

4 B. at least two depressions or at least two grooves (150) are formed in the inner  
5 wall (140) with each of said grooves (150) receiving at least one vane (90).  
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7 37. (Original) A waste liquid treatment system of claim 36 further comprising:

8 A. the at least one vane (90) having a vane surface (92);

9 B. the at least one vane (90) extending from the central core element (25) along  
10 the length of said central core element (25); the surface (92) covered with a biofilm (97);

11 C. the at least eight vanes (90) are spaced equidistant from the adjoining vane  
12 (90) and extend from the central core element (25).  
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14 38. (Original) A waste liquid treatment system of claim 37 further comprising:

15 A. at least four fins (200) extending from said outer wall (190);

16 B. the fin (200) is generally elongated having a fin surface (210);

17 C. the plurality of tubes (20) contact adjacent tubes (20) at the respective tube  
18 outer walls (190) at least one contact point (195) where affixing means fix adjacent tubes  
19 together and hence to fix the position of the plurality of tubes (20) within the media  
20 matrix (1).  
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22 39. (Original) A waste liquid treatment system of claim 37 further comprising:

23 A. contact point (195) affixing means including adhesives, mechanical fasteners  
24 and other methods or devices;

25 B. at least fins 1...n extending outwardly from the outer wall (190);  
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1 C. at least one contact points (195) comprised of flattened portion of the outer  
2 wall surface (195) extending from the tube top (25) to the tube bottom (30) parallel with  
3 the tube axis (37).

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5 40. (Original) A waste liquid treatment system of claim 39 further comprising:

6 A. said tubes (20) in the media matrix (1) may be alternatively or additionally  
7 fixed in position by fin (200) affixing means employed at an intersection of fins (200) of  
8 adjoining tubes (20).

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11 41. (Original) A waste liquid treatment system of claim 40 further comprising:

12 A. the tube inner wall (140) having an inner wall surface (142), the tube outer  
13 wall (190) having an outer wall surface (192); inner wall surface (142), outer wall surface  
14 (192), vane surface (92) and fin surface (210) receives biofilm (97).

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16 42. (Original) A waste liquid treatment system of claim 41 further comprising:

17 A. wastewater inlet (350) and discharge means (400) comprising pipes; the  
18 wastewater inlet (350) directs flow of wastewater into the media matrix (1); the discharge  
19 pipes (400) discharges from the media matrix container (250).

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